



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/626,535 | 07/25/2003 | Tatsuro Uchida | 03560.003334. | 1160 |
| 5514 | 7590 | 04/18/2006 | EXAMINER | |
| FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112 | | | SONG, SARAH U | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2874 | |

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|---------------------------------|--|
| Office Action Summary | Application No. 10/626,535 | Applicant(s) UCHIDA, TATSURO | |
| | Examiner Sarah Song | Art Unit 2874 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,7,9,11,12 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,7,9 and 16 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's communication filed on February 1, 2006 has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims, are persuasive and the rejections based upon prior art made of record in the previous Office Action are withdrawn. Claims 1, 4 and 11 have been amended. New claim 16 has been added. Claims 1, 2, 4, 7, 9, 11, 12 and 16 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 2, 4, 7, 9, 11, 12 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirota et al. (U.S. Patent 5,822,475 newly cited).**

4. Regarding claim 1, Hirota et al. disclose an optical waveguide apparatus comprising: a sheet-shaped optical waveguide 21 capable of propagating light in two-dimensional directions; a light emitting unit 42a (such as the uppermost unit located at the right side of the layer 21 in Figure 6) for emitting a light beam to said waveguide, light receiving units 42b for receiving light propagating in said waveguide; a light diffusing structure 21a (such as the one located at the lower portion of the layer 21 in Figure 6) for diffusing the light beam from said light emitting unit; and a closed region (bounded by substrate 10) having said light receiving units, wherein said light diffusing structure is located closer to the light receiving units than said emitting unit in said closed region, wherein the light beam emitted by said light emitting unit propagates to said

Art Unit: 2874

light diffusing structure, the light beam is diffused in said closed region by said light diffusing structure to propagate in all directions from the light diffusing structure within the closed region, and said light receiving units are located at positions that surround the light diffusion structure within the closed region to receive the light diffused by said light diffusing structure. See Figure 6 for example.

5. Regarding claim 2, the light diffusing structure is constructed such that a propagation condition of light propagating in said waveguide can be changed at a place on a light propagation path between said light emitting unit and at least one of said light receiving units in a relaying manner.

6. Regarding claim 4, the light diffusing structure has a thickness less than a thickness (in the direction of light propagation) of a core layer of said waveguide.

7. Regarding claim 7, the light diffusing structure includes a structure capable of changing a propagation condition of light propagating in said waveguide without processing light in a regenerative manner by amplification and shaping.

8. Regarding claim 9, the waveguide has a structure in which a sheet-shaped core layer 21 is sandwiched by a first cladding layer 22 and a second cladding layer 22. See Figure 8.

9. Regarding claims 11 and 12, Hirota et al. discloses the waveguide apparatus further comprising an optical-path converting structure (additional structures 21a) for converting at least one light beam emitted from said light emitting unit into at least one light beam propagating in at least one predetermined direction, said optical-path converting structure being arranged in a portion of said waveguide below said light emitting unit. The structure 21a appears to comprise a spherical or hemispherical structure.

Art Unit: 2874

10. Regarding claim 16, said light emitting unit, at least one of said light receiving units and said light diffusing structure are not located on a straight line extending along said sheet-shaped optical waveguide.

Response to Arguments

11. Applicant's arguments with respect to claims 1, 2, 4, 7, 9, 11, 12 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

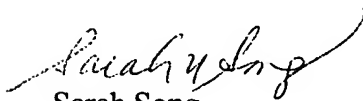
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Song whose telephone number is 571-272-2359. The examiner can normally be reached on M-Th 7:30am - 6:00pm.

Art Unit: 2874

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sarah Song
Primary Examiner
Group Art Unit 2874